



Bioenergi fra skoven sammenlignet med landbrug

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Bioenergi fra skoven sammenlignet med landbrug

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post doc

Afdelingen for Biosystemer
Programmet for Bioenergi og Biomasse

Præsenteret ved:

'Workshop om skovenes rolle i klimaet

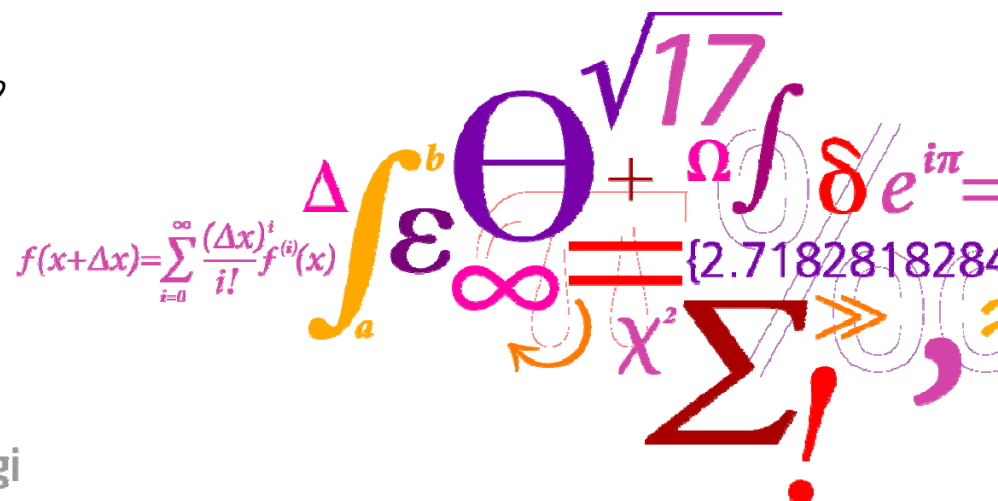
The Copenhagen Climate Exchange, Dec. 4 2009

Øksnehallen, København

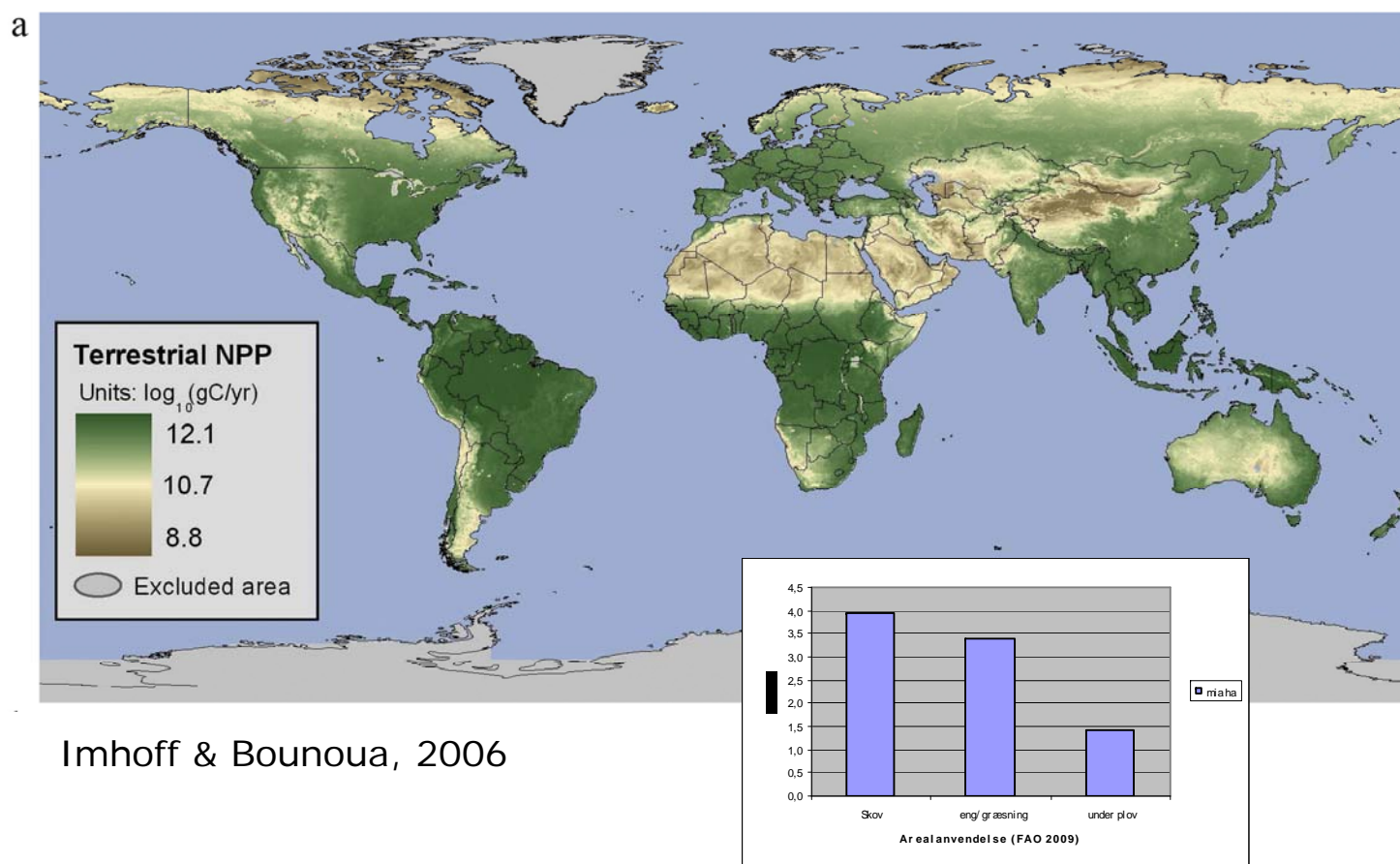
Arrangør: Danmarks Naturfredningsforening

Risø DTU

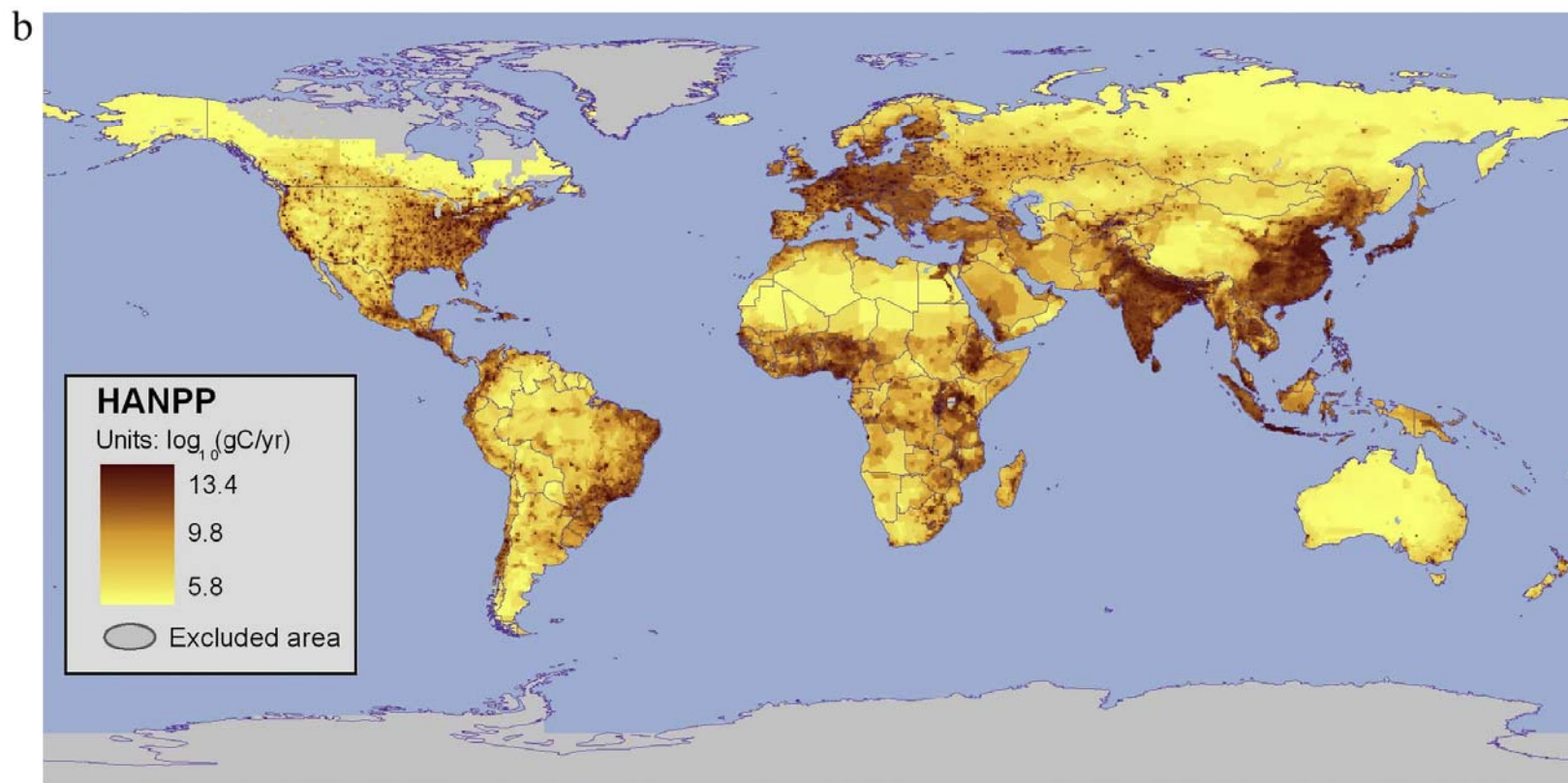
Nationallaboratoriet for Bæredygtig Energi



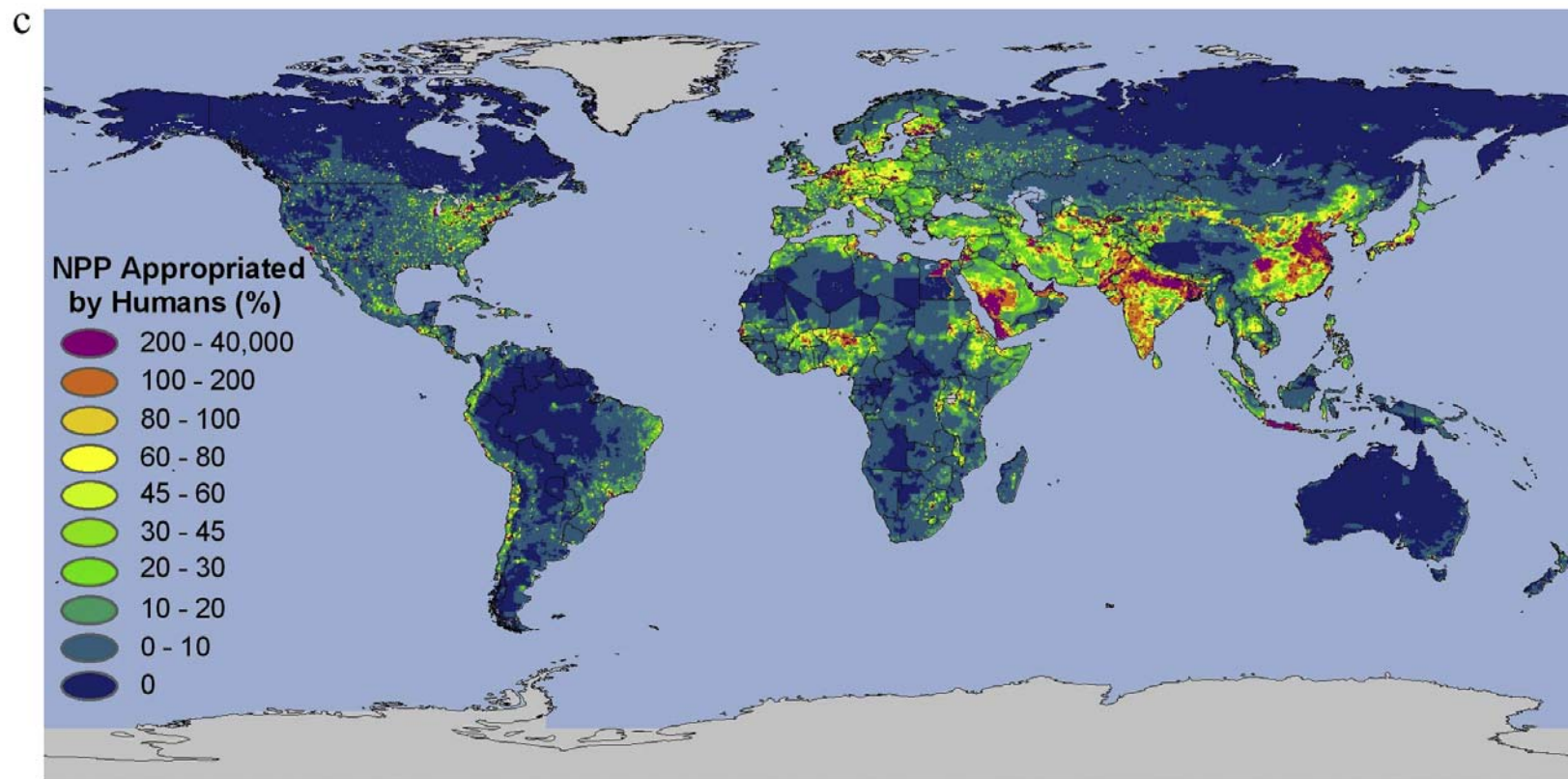
Fotosyntese er planteproduktion



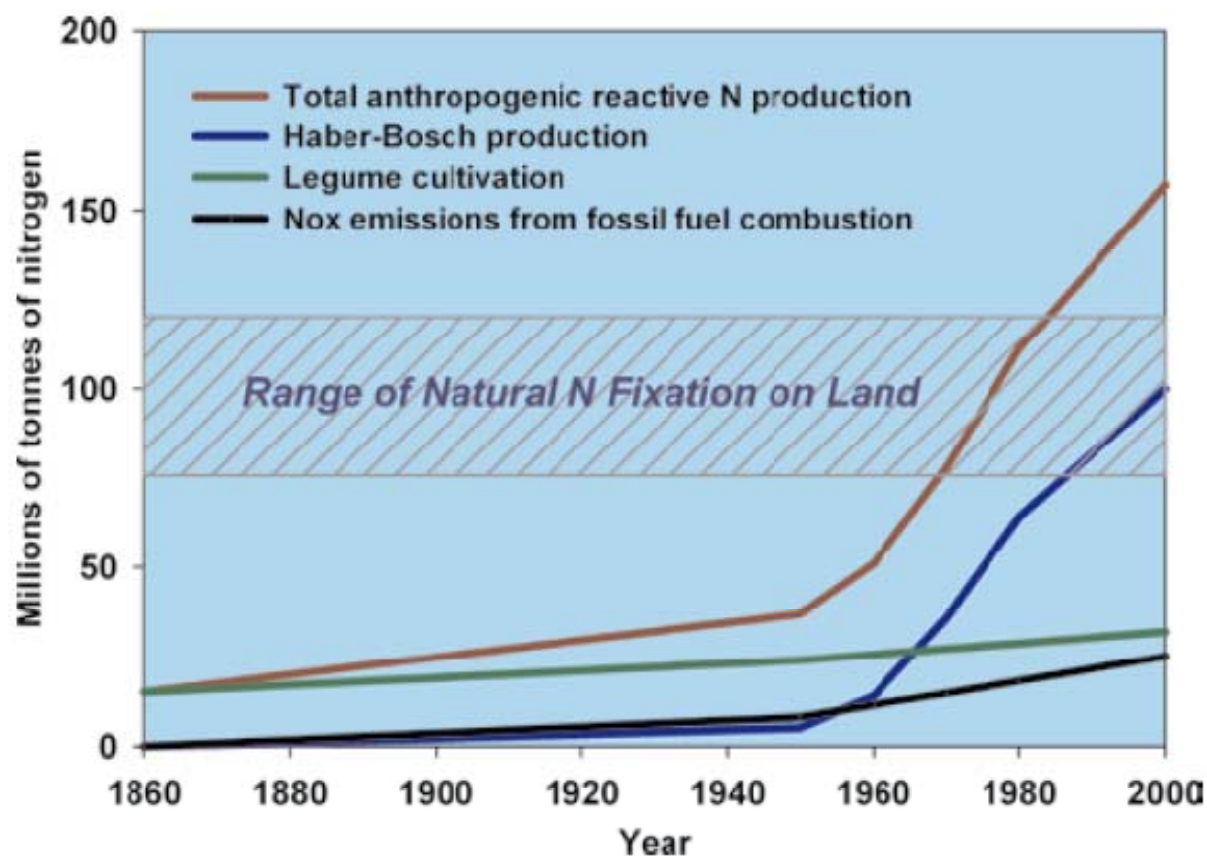
Menneskeligt forbrug af biologiske ressourcer



Andel af den samlede produktion anvendt af mennesker

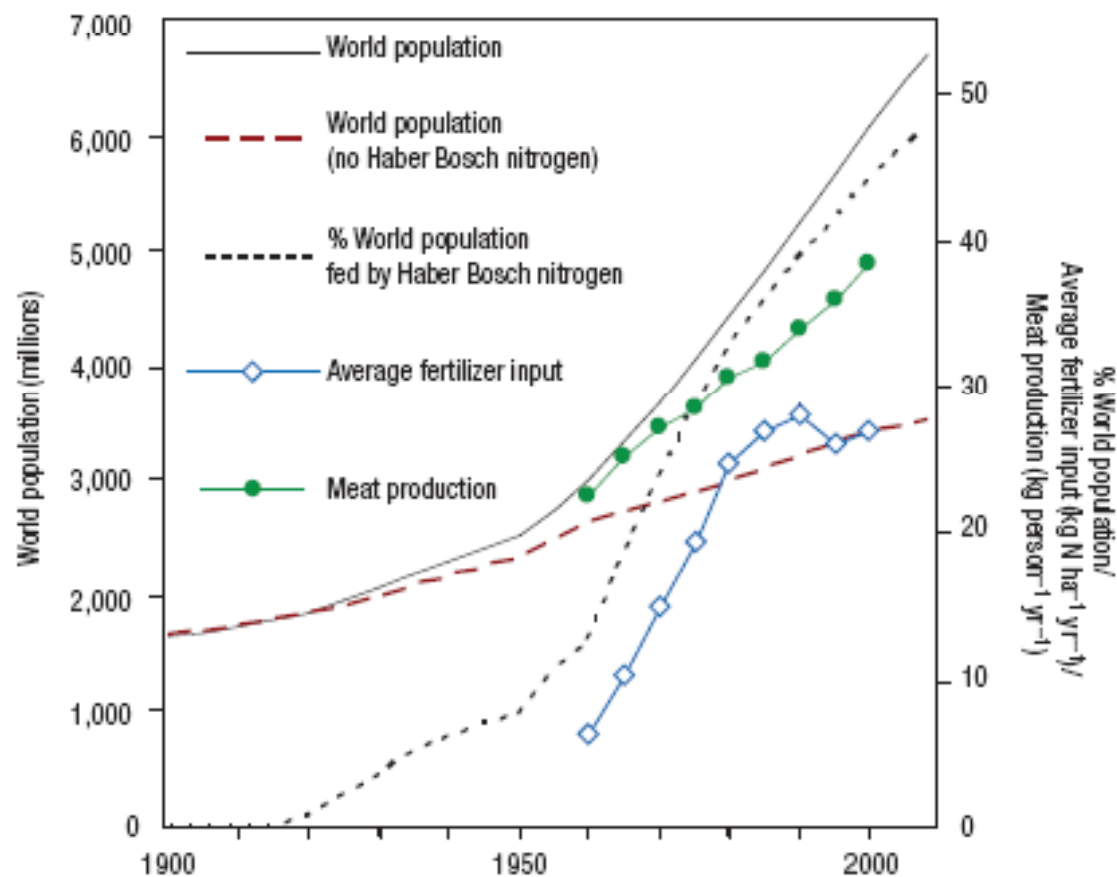


Naturligt og menneskeskabt reaktivt kvælstof



United Nations Environment Programme, WHRC 2007

Den grønne revolution – syntetisk kvælstof



United Nations Environment Programme, WHRC 2007

Kvælstof i eksporterede afgrøder



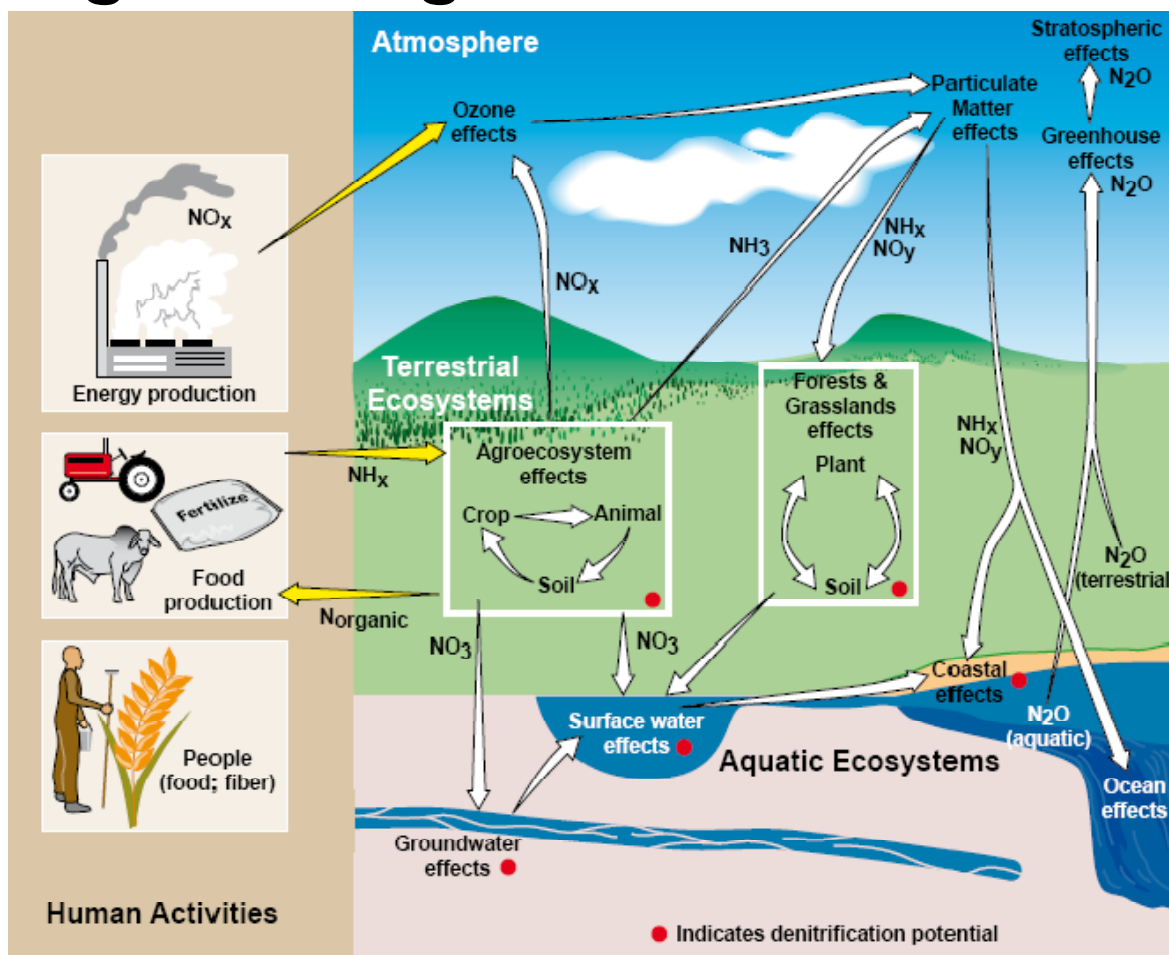
FIG 3B Nitrogen contained in internationally traded crops, by continent.

2004 data in thousands of tons of N; minimum requirement for drawing a line is 20,000 tons N.

Total international N trade in crops, 2004 – 11.5 million tons N.

United Nations Environment Programme, WHRC 2007

Reaktivt kvælstof tabes som lattergas – en kraftig drivhusgas



United Nations Environment Programme, WHRC 2007

Dansk natur – uden dyrkning

Kvælstofnedfald

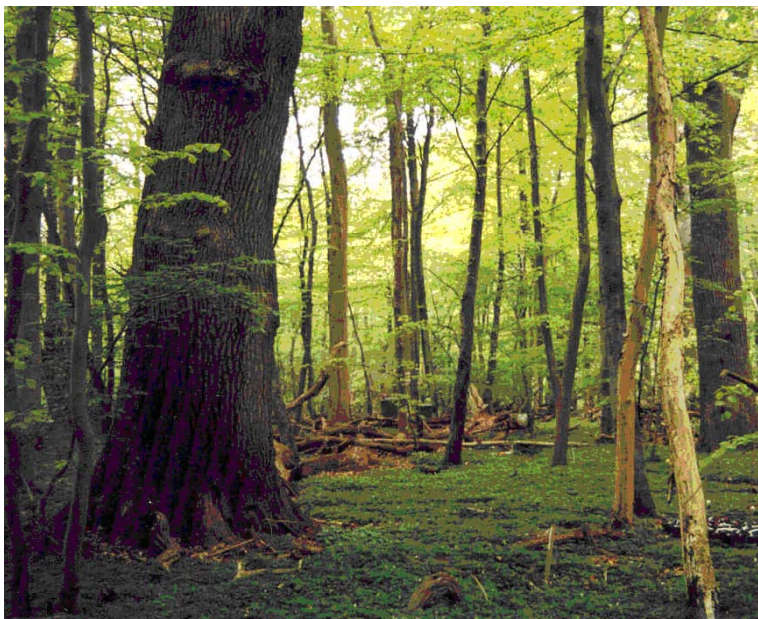
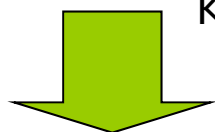
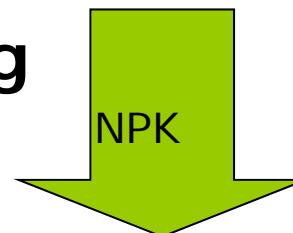
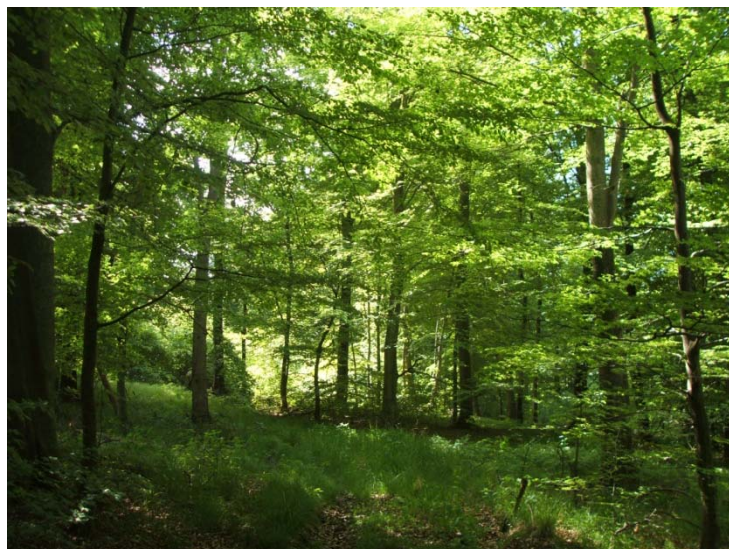
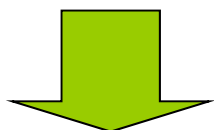
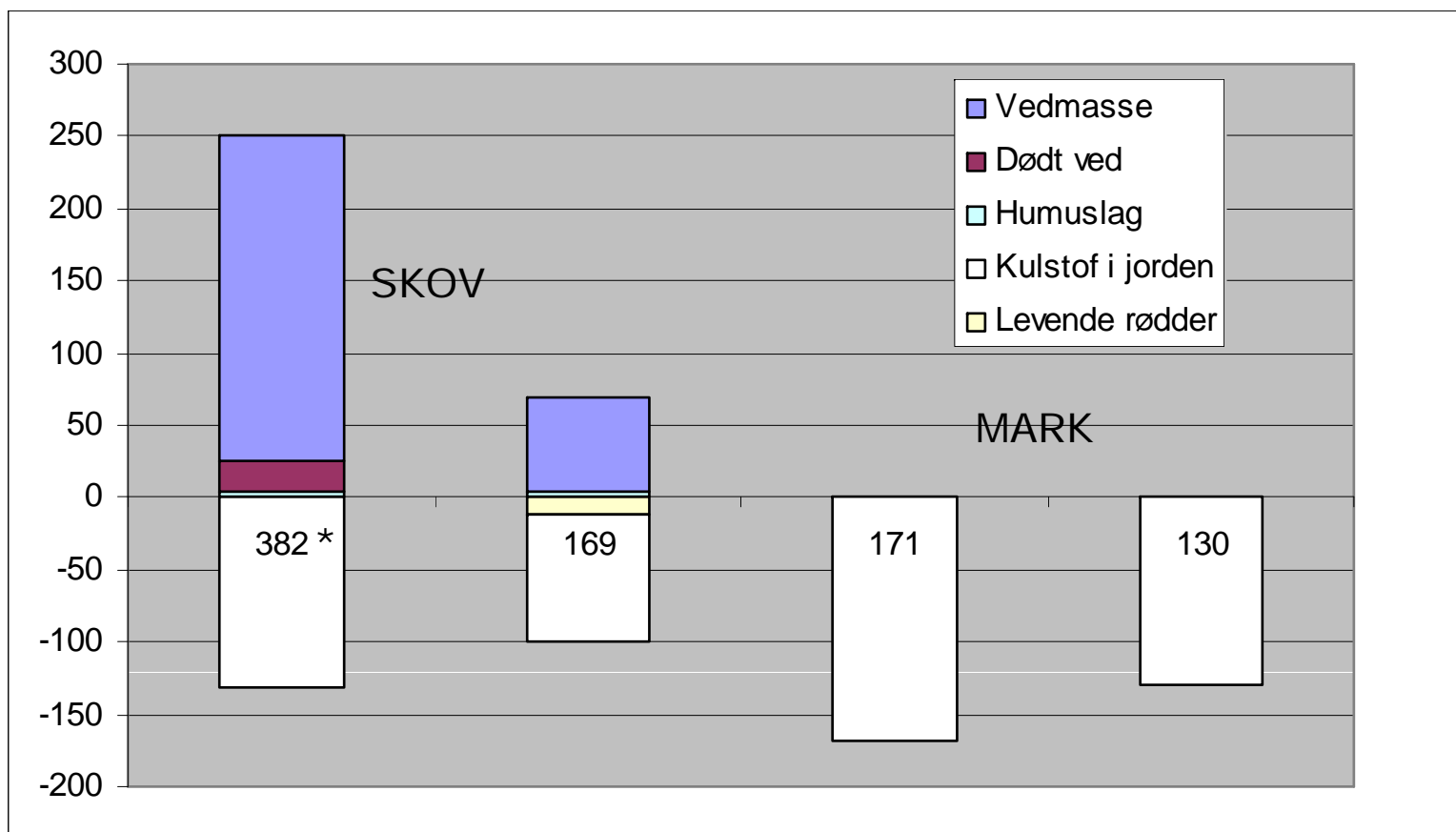


Foto L. Dalsgaard

Dansk natur – med dyrkning

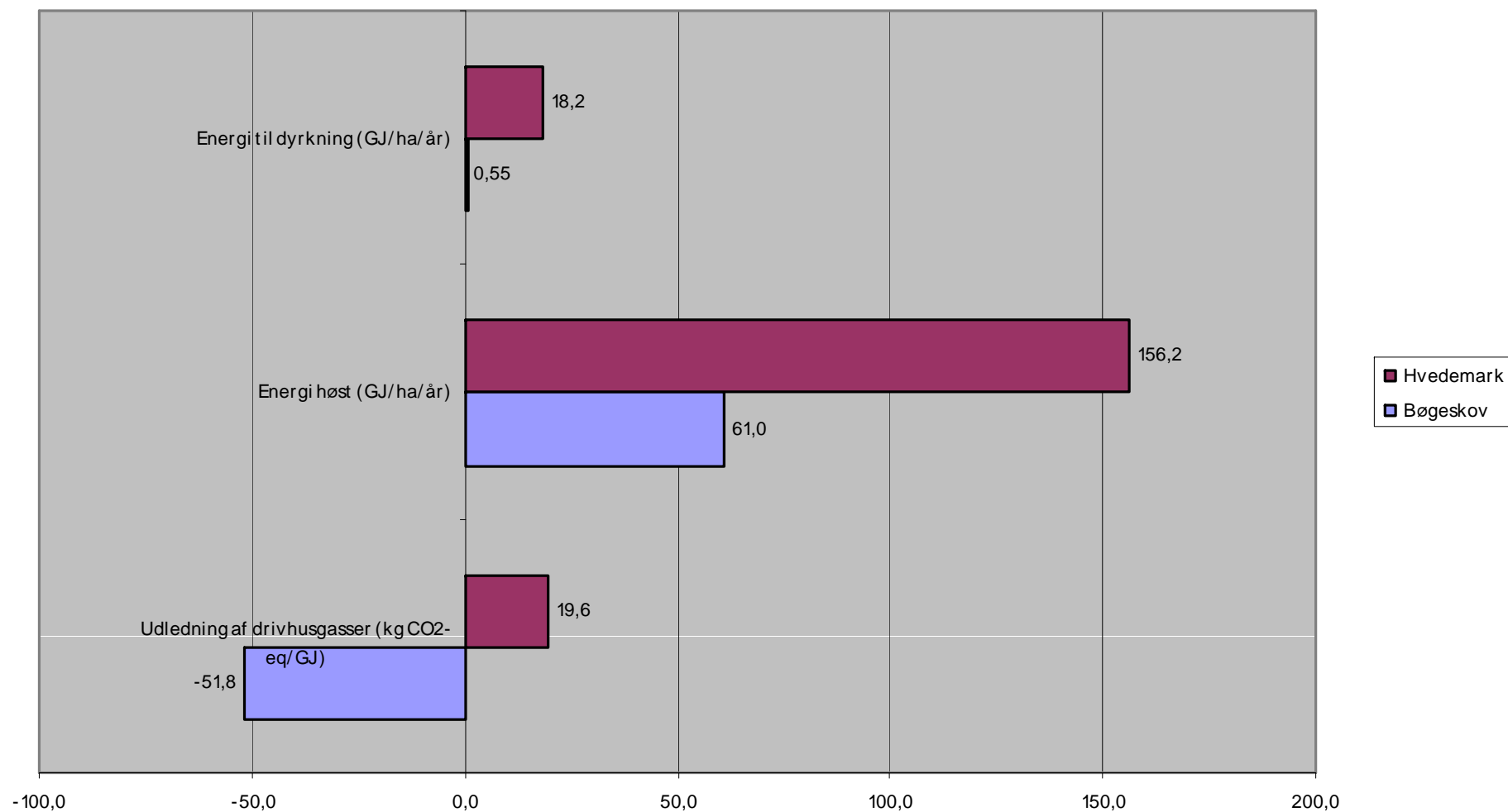


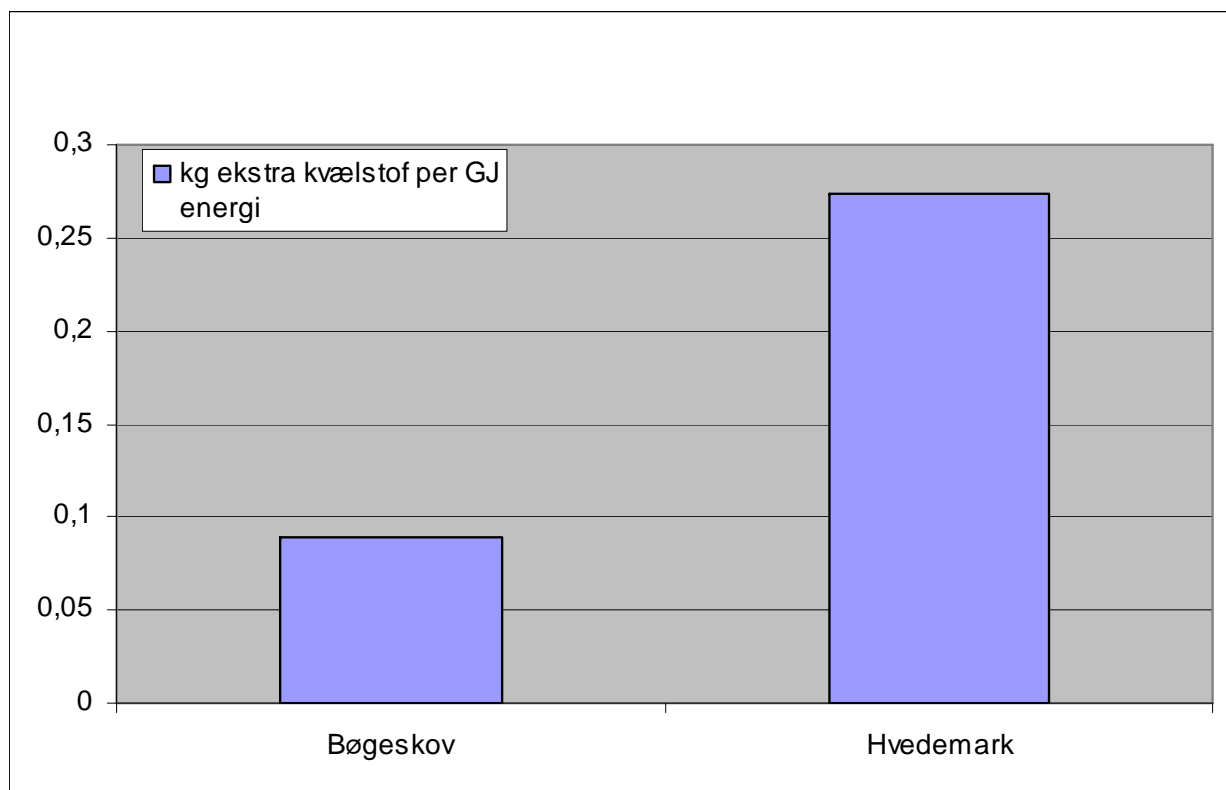
Kulstoflageret i de fire typer



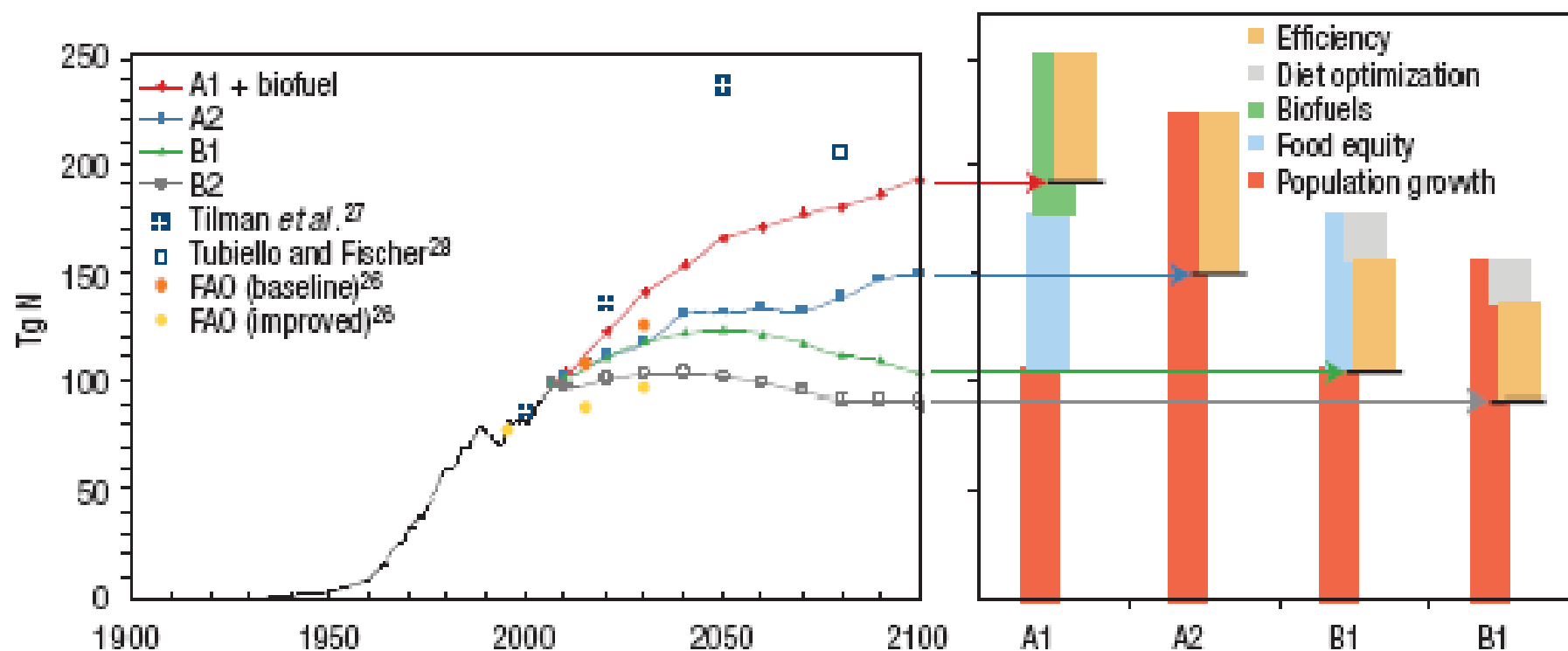
* Vesterdal & Christensen, 2007

Bioenergi fra skov eller landbrug ?

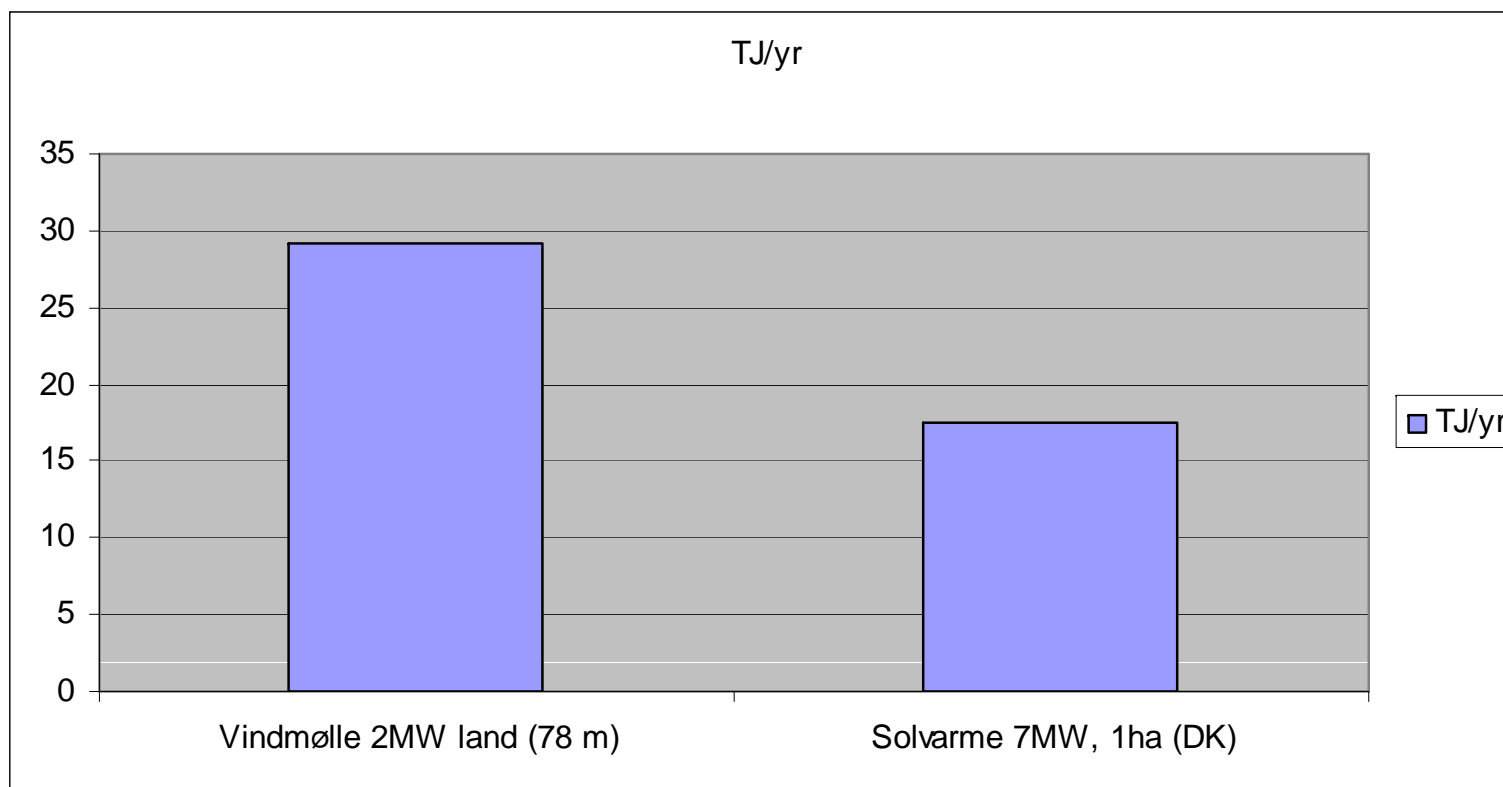


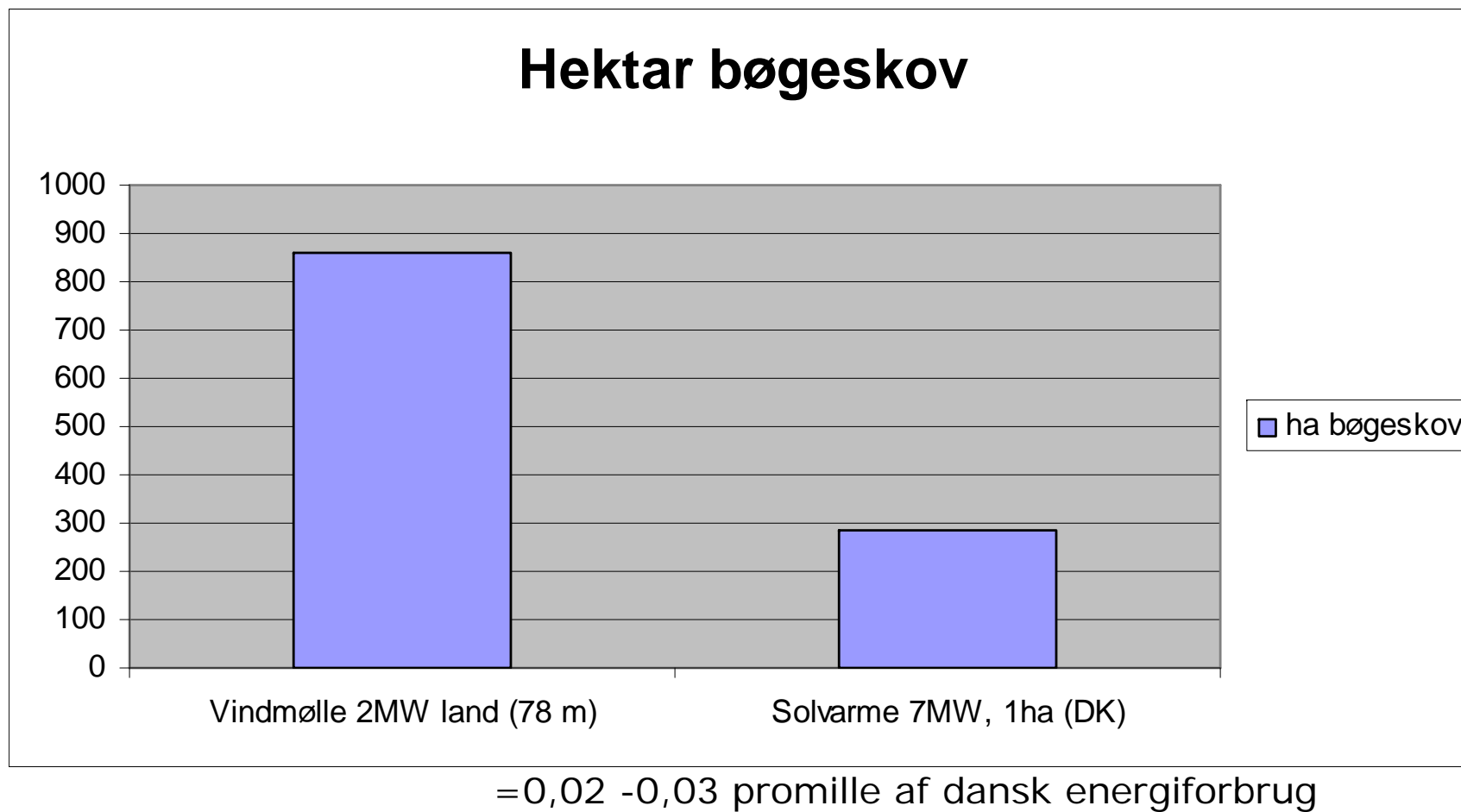


Der bliver mere reaktivt kvælstof



Bioenergi fra skov eller andre vedvarende energikilder





Perspektiver

- Vi skal sætte grænser for dyrkning – og give plads til den udyrkede natur
- Bioenergi kan være kvælstof-negativ !
- Landbruget har en energi- og kvælstofgæld
- Gælden kan mindskes, men aldrig blive 0
- Først mad, så biomaterialer, så bioenergi
- Bioenergi har en rolle blandt andre vedvarende energiformer